LISTING OF THE CLAIMS

1. (Original) A fluorometry device for determining concentration of spectrally distinguishable species in a biological sample, the device comprising:

a light source adapted to provide a source beam;

a plurality of samples;

a plurality of optical devices adapted to filter the source beam, to filter fluorescent light from the samples, and to separate the source beam from the fluorescent light, wherein each of the plurality of optical devices is coupled to a movable platform; and

a detector adapted to receive the fluorescent light emitted from the samples, wherein the fluorescent light is not in focus and does not provide spatial content from a focus plane in the samples,

wherein the device provides a data signal representative of the concentration of spectrally distinguishable species based on the intensity of fluorescent light emitted by the samples.

2. (Original) The fluorometry device of claim 1, further comprising:

a beamsplitter adapted to separate the source beam from the fluorescent light.

3. (Original) The fluorometry device of claim 2, further comprising:

an excitation filter adapted to filter the source beam and an emission filter adapted to filter the fluorescent light, wherein the excitation filter, the emission filter, and the beamsplitter provide a first narrow wavelength range for excitation and a second narrow wavelength range for emission.

4. (Original) The fluorometry device of claim 1, further comprising:

a motor adapted to move the platform to align the source beam with each optical device and to align the samples with the detector.

5 (Original) The fluorometry device of claim 4, wherein the motor rotates the platform.

6. (Original) The fluorometry device of claim 4, wherein the motor linearly moves the platform.

7. (Original) The fluorometry device of claim 1, further comprising:

a light blocker attached to the movable platform adapted to prevent the source beam from reaching the samples.

8. (Original) The fluorometry device of claim 1, further comprising:

an alignment pin connected to the optical device.

9. (Original) The fluorometry device of claim 1, wherein the light source comprises at least one LED.

10. (Original) The fluorometry device of claim 1, wherein the optical device collimates the light passing through it.

11. (Currently Amended) A method of determining the concentration of spectrally distinguishable species in a biological sample with fluorometry, the method comprising:

moving a movable platform to position a first optical device in the optical paths between a light source and a plurality of samples and between the sample region and a detector;

passing light from the light source to the sample region and from the sample region to the detector through ~~a~~ the first optical device, wherein the first optical device passes light in a first wavelength band that primarily excites a first dye from the light source to the sample region, and passes light in a second wavelength band that is primarily emitted from the first dye from sample region to the detector;

moving the movable platform to position a second optical device in the optical paths between the light source and the sample region and between the sample region and the detector;

passing light from the light source to sample region and from the sample region to the detector through the second optical device, wherein the second optical device passes light in a third wavelength band that primarily excites a second dye from the light source to the sample region, and passes light in a fourth wavelength band that is primarily emitted from of the second dye from the sample region to the detector;

focusing the light in the second wavelength band and fourth wavelength band on ~~the~~ a pupil of ~~the~~ a camera; and

generating a data signal representative of the concentration of the spectrally distinguishable species in the sample based on the light passed from the sample region to the detector.

12. (Original) The method of claim 11, further comprising:

moving the movable platform to interpose a light blocker to prevent a substantial portion of light from reaching the sample region.

13. (Original) The method of claim 12, wherein the optical devices and the light blocker are moved by rotating the movable platform.

14. (Original) The method of claim 12, wherein the optical devices and the light blocker are moved by linearly moving the movable platform.

15. (Withdrawn) An optical device for fluorometry to determine concentration of spectrally distinguishable species in a biological sample, the device comprising:

a first filter to condition excitation light;

a second filter to condition emission light; and

a beamsplitter to separate the excitation light and the emission light;

wherein the optical device is adapted focus the emission light on the pupil of the detector.

16. (Withdrawn) The optical device of claim 15, further comprising:

a baffle adapted to reduce background light within the optical device.

17. (Withdrawn) The optical device of claim 15, further comprising:

alignment pins adapted to position the optical device to provide optimum contact with the excitation light and the emission light.

18. (Withdrawn) The optical device of claim 15, further comprising:

optical elements adapted to collimate the excitation light and emission light passing through the device.

19. (Currently Amended) A method of determining the concentration of spectrally distinguishable species in a biological sample with fluorometry, the method comprising:

providing a plurality of samples comprising a plurality of spectrally distinguishable species;

providing a plurality of optical devices adapted to filter excitation light, to filter fluorescent light from the samples, and to separate the excitation light from the fluorescent light, wherein each of the plurality of optical devices is coupled to a movable platform, and wherein each optical device is adapted to one spectrally distinguishable species in the samples;

focusing the light in ~~the~~ a second wavelength band and a fourth wavelength band on ~~the~~ a pupil of ~~the~~ a camera;

thermal~~ly~~ cycling the plurality of samples;

transitioning between optical device by moving the platform;

determining the concentration of each spectrally distinguishable species by using a data signal generated throughout the thermal cycling.

20. (Original) The method of claim 19, wherein the concentration of spectrally distinguishable species provides information related to a diagnostic assay.

21. (Original) The method of claim 20, wherein the diagnostic assay is for HIV screening.

22. (Original) An apparatus for determining the concentration of spectrally distinguishable species in a biological sample by fluorometry, the device comprising:

means for moving each one of a plurality of optical devices disposed on a platform to receive a source beam directed towards a sample and emitted from a light source;

means for blocking a plurality of wavelengths of light in the source beam;

means for blocking a plurality of wavelengths of light emitted from the sample when the sample comprises DNA and at least one dye; and

means for generating a plurality of data signals, each data signal representative of the concentration of DNA in the sample, wherein a data signal is generated when each one of the plurality of optical devices receives the source beam.